DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017254
Date Inspected: 06-Oct-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC)

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: N/A

Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Electrode to specification:	☐ Yes	☐ No	☑ N/A	**Weld Procedures Followed:**	☐ Yes	☐ No	☑ N/A
Qualified Welders:	☐ Yes	☐ No	☑ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
Approved Drawings:	☐ Yes	☐ No	☑ N/A	**Approved WPS:**	☐ Yes	☐ No	☑ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

CWI Present: ☑ Yes ☐ No

Bridge No: 34-0006
Component: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 10BE to 10CE (Transverse Splice T-Ribs)

This QA Inspector performed Dimension Control Inspection along with ABF QA personnel on the Transverse Splice T-Ribs to T-Ribs for the Segment 10BE to Segment 10CE between Panel Point (PP) 91 to PP 92 at the following locations after heat straightening.

Work Point E1 towards Work Point E3 (Side Panel Bike Path Side) total 2 T-Ribs.

Work Point E3 towards Work Point E4 (Bottom Panel) total 1 T-Rib.

Work Point E4 towards Work Point E6 (Side Panel Cross Beam Side) total 4 T-Ribs.

The QA Inspector measured the Vertical Offset using 1(One) Meter Straight Edge and measured the Horizontal Offset on the web using a Bridge Cam gauge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 10AW (Plumbness and Flatness after Heat Straightening)

This QA Inspector performed Dimension Control Inspection along with ABF QA Inspector for measuring plumbness and flatness on the deck panel to deck panel diaphragm between U-Rib at 30th location (reference of numbering taken from counter weight side towards cross beam side) on Segment 10AW at Panel Point (PP) 86 after heat straightening.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 10BW (Plumbness and Flatness after Heat Straightening)

This QA Inspector performed Dimension Control Inspection along with ABF QA Inspector for measuring plumbness and flatness on the deck panel to deck panel diaphragm between U-Rib at 29th, 30th, 31st, 32nd, 33rd, 34th, 35th and 36th locations (reference of numbering taken from counter weight side towards cross beam side) on Segment 10BW at Panel Point (PP) 91 after heat straightening.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 10BE (Plumbness and Flatness after Heat Straightening)

This QA Inspector performed Dimension Control Inspection along with ABF QA Inspector for measuring plumbness and flatness on the deck panel to deck panel diaphragm between U-Rib at following locations (reference of numbering taken from cross beam side towards bike path side) on Segment 10BE.

At 28th, 29th and 39thlocations at Panel Point (PP) 91 after heat straightening.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 10AW (Truss Post and Road Barrier Brackets)

This QA Inspector witnessed the final bolt tension verification on bolts installed at Corner Assembly connecting the Road Barrier Brackets, X37B Brackets Inclined Truss Post and Vertical Truss Post at Counter Weight side and Cross Beam side between Panel Points (PP) 85.5 to PP 86, PP 86 to PP 87 and PP 87 to PP 88 for Segment 10AW. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00507 dated October 06, 2010.

The bolt sizes used were M22 x 55 RC Lot # DHGM220044 and the final torque value established was 473 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220109 and the final torque value established was 350 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M24 x 60 RC Lot # DHGM240014 and the final torque value established was 567 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240002 and the final torque value established was 573 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The Manual Torque wrench used was Serial No. XO2-776 and XO2-676. Please reference the pictures attached for more comprehensive details.

Segment 10BW (Truss Post and Road Barrier Brackets)

This QA Inspector witnessed the final bolt tension verification on bolts installed at Corner Assembly connecting the Road Barrier Brackets, X37B Brackets, Inclined Truss Post and Vertical Truss Post at Counter Weight side and Cross Beam side between Panel Points (PP) 89 to PP 90 and PP 90 to PP 91 for Segment 10BW. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00507 dated October 06, 2010.

The bolt sizes used were M22 x 55 RC Lot # DHGM220044 and the final torque value established was 473 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220109 and the final torque value established was 350 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M24 x 60 RC Lot # DHGM240014 and the final torque value established was 567 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240002 and the final torque value established was 573 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The Manual Torque wrench used was Serial No. XO2-776 and XO2-676.

General Note: At Segment 10AW between PP 88 to PP 89 and Segment 10BW between PP 91 and PP 92 Road Barrier Brackets, Inclined Truss Post and Vertical Truss Post bolts not installed thus ZPMC QC Mr. Hu Mei Gang did not offer for inspection to Caltrans QA Inspector.

Segment 10CW (Truss Post and Road Barrier Brackets)

This QA Inspector witnessed the final bolt tension verification on bolts installed at Corner Assembly connecting the Road Barrier Brackets, X37B Brackets, Inclined Truss Post and Vertical Truss Post at Counter Weight side and

Cross Beam side between Panel Points (PP) 92 to PP 93, PP 93 to PP 94 and PP 94 to PP 94.5 for Segment 10CW. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00507 dated October 06, 2010.

The bolt sizes used were M22 x 55 RC Lot # DHGM220044 and the final torque value established was 473 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220109 and the final torque value established was 350 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M24 x 60 RC Lot # DHGM240014 and the final torque value established was 567 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240002 and the final torque value established was 573 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The Manual Torque wrench used was Serial No. XO2-776 and XO2-676.

Cross Beam (CB) # 13

This QA Inspector performed Dimension Control Inspection along with ABF QA Inspector for measuring offset between the stiffeners at floor beam (FL3) extension at Segment 10AW and Segment 10AE to Cross Beam # 13 stiffeners at bottom panel, vertical web plate and deck plate at following locations:

At Panel Point (PP) 86, Segment 10AW offset measurement performed between floor beam stiffeners to west side Vertical Web Plate stiffeners of cross beam # 13 total 13 stiffeners.

At Panel Point (PP) 87, Segment 10AW offset measurement performed between floor beam stiffeners to centre Vertical Web Plate stiffeners of cross beam # 13, total 13 stiffeners.

At Panel Point (PP) 88, Segment 10AW offset measurement performed between floor beam stiffeners to east side Vertical Web Plate stiffeners of cross beam # 13, total 13 stiffeners.

Between Panel Points (PP) 86 to PP 87, Segment 10AW offset measurement performed between deck panel stiffeners to deck panel stiffeners of cross beam # 13, total 11 stiffeners.

Between Panel Points (PP) 87 to PP 88, Segment 10AW offset measurement performed between deck panel stiffeners to deck panel stiffener of cross beam # 13, total 11 stiffeners.

Between Panel Points (PP) 86 to PP 87, Segment 10AW offset measurement performed between bottom panel stiffeners to bottom panel stiffeners of cross beam # 13, total 5 stiffeners.

Between Panel Points (PP) 87 to PP 88, Segment 10AW offset measurement performed between bottom panel stiffeners to bottom panel stiffener of cross beam # 13, total 5 stiffeners.

At Panel Point (PP) 86, Segment 10AE offset measurement performed between floor beam stiffeners to west side Vertical Web Plate stiffeners of cross beam # 13 total 13 stiffeners.

At Panel Point (PP) 87, Segment 10AE offset measurement performed between floor beam stiffeners to centre Vertical Web Plate stiffeners of cross beam # 13, total 13 stiffeners.

At Panel Point (PP) 88, Segment 10AE offset measurement performed between floor beam stiffeners to east side Vertical Web Plate stiffeners of cross beam # 13, total 13 stiffeners.

Between Panel Points (PP) 86 to PP 87, Segment 10AE offset measurement performed between deck panel stiffeners to deck panel stiffeners of cross beam # 13, total 11 stiffeners.

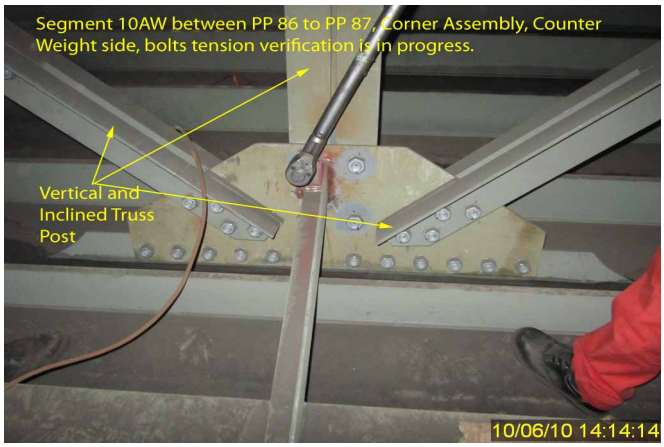
Between Panel Points (PP) 87 to PP 88, Segment 10AE offset measurement performed between deck panel stiffeners to deck panel stiffener of cross beam # 13, total 11 stiffeners.

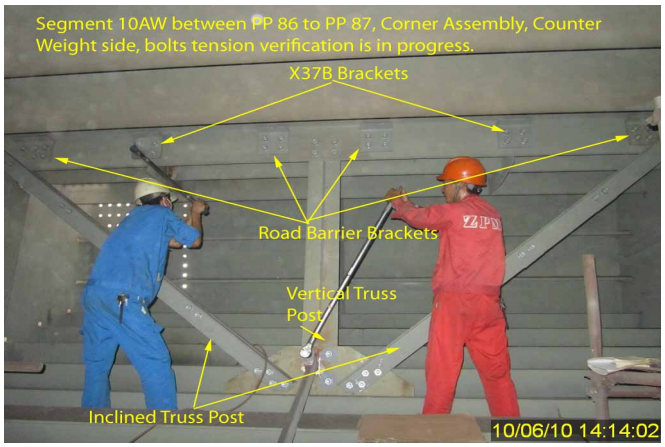
Between Panel Points (PP) 86 to PP 87, Segment 10AE offset measurement performed between bottom panel stiffeners to bottom panel stiffeners of cross beam # 13, total 5 stiffeners.

Between Panel Points (PP) 87 to PP 88, Segment 10AE offset measurement performed between bottom panel stiffeners to bottom panel stiffener of cross beam # 13, total 5 stiffeners.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.





Summary of Conversations:

No relevant conversations were reported on this date.

Comments

WELDING INSPECTION REPORT

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This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer